

## **ABERDEEN AREA**

The Aberdeen Area hospital and clinic system has limited internal telemedicine use. The Rosebud IHS Public Health Hospital transmits radiology film to the Rapid City PHS Indian Hospital once a month. The Aberdeen Area Black Hills Training Center has an interagency agreement with the Fort Meade Veterans Medical Center for satellite distance education and on-site training.

Fort Yates and Sisseton PHS Indian Hospitals and the West River Health Clinic are served by three regional telemedicine / telehealth networks. Eagle Butte Family Clinic retains equipment, but is no longer an active member in the same network used by West River.

The McKennan Health Services will manage an obstetrical care access program for PHS Indian Hospitals at Pine Ridge, Sisseton, and Rosebud. The hospitals will use 3-D ultrasound equipment to capture hand-scanned images that no longer rely on the skill of the person acquiring images. The perinatologist at the remote site is able to rotate the images for enhanced viewing of heart valves etc.

### **1. Obstetrical Care Access Project for Sisseton, Pine Ridge and Rosebud**

Area Office	Aberdeen Area
Indian Facility	Pine Ridge PHS Indian Hospital Rosebud Indian Health Service Hospital Sisseton Indian Health Service Hospital
Primary Use	Telemedicine (neonatal)
Use Status	New project
Facility Contact	Terri Friend, Nurse Midwife and Project Contact Dr. Michael Cerney, Director of OB/Gyn, Dr. LaSeur, Clinical Director) Pine Ridge PHS Indian Hospital, Pine Ridge, SD 57770 Phone 605-867-3128, Fax 605-867-3217  Kathy Ray, Project Contact Dr. Timothy Ryschon, Clinical Director Rosebud Indian Health Service Hospital, Soldier Creek Road, Rosebud, SD 57570 Phone 605-747-2231, Fax 605-747-2216  Peggy Johnson, Director of Nursing Dr. Fernando J. Zambrana, Clinical Director

Sisseton Indian Health Service Hospital, PO Box 189, Sisseton, SD 57262  
Phone 605-698-7606, Fax, 605-747-2216

**Funding** RUS - FY 98 - \$205,706  
McKenna \$141,000, plus in-kind protocol development, perinatology data review, telecom costs (switched 56 line to McKenna), and one full-time staff support

**Grant Contact** Deb Soholt, RN, MS, Director, Women's & Children Services & Project Administrator, Phone 605-322-3490, E-mail <Deb.Soholt@mckenna.org>  
Dr. Gary Helmbrecht, Principal Investigator/Maternal-Fetal Medicine, Phone 605-322-8933  
McKenna Health Services (Avera McKennan Hospital), 800 East 21<sup>st</sup> Street, Sioux Falls, SD 57117-5045, Web site: <<http://www.mckenna.org/>>

**Summary** **Three South Dakota IHS Indian Hospitals located at Pine Ridge, Sisseton, and Rosebud will serve as a beta test site for 3-D ultrasound equipment with prenatal case review provided by McKenna Health Services, Sioux Falls.**

McKenna Health Services located in Sioux Falls manages a federal grant for 3-Dimensional ultrasound consultation for three tribes with higher than average statistical levels of infant mortality and morbidity compared to the U.S. rate of 8.5 per 1,000 live births. The three end-users Indian Health Service sites and rates are Pine Ridge (25.1), Sisseton (13.3), and Rosebud (18.5).

The project deploys the Medical Ultrasound Three-dimensional Portable Advanced Communication (MUSTPAC) as a beta-testing site for FDA product approval. Another beta test site is the Philadelphia-based Mercy Hospital that will collect data in the emergency room for kidney and gallstone detection. Prior field-testing included Bosnia and Mt. Everest. MUSTPAC was developed for the Defense Advanced Research Projects Agency (DARPA) by the Pacific Northwest National Laboratory. The portable unit is equipped with advanced communications and can capture 3-D images instead of the conventional 2-D for ultrasound remote consult readings.

The expert reading the image can manipulate the image taken from a free-hand scan for closer evaluation of hard to see heart valves etc. This equipment overcomes an existing problem of the image quality dependent upon the skill of the person acquiring the image. A person with knowledge of anatomy can learn how to use the equipment in 15-minutes. The end-users at the Indian hospitals for this project will be physicians, midwives and/or a family nurse practitioner.

The project's medical services include 3-D ultrasound imaging to all obstetrical patients, complete with consultation and evaluation by a McKennan perinatologist. Imaging during early pregnancy confirms intrauterine location of fetus or placenta, genetic screening, and accurate pregnancy dating. Mid-pregnancy applications focus on fetal anomalies. During late pregnancy, the imaging detects abnormalities in growth and predicts birth weight. The perinatologist expert can review store-and-forward information or in real-time with the examiner using a virtual wand. The technology supports educational services.

The MUSTPAC system used for this project is bench assembled and marketed as a prototype for a unit cost of \$115,333 installed. Beta test data will detail a Food and Drug Administration (FDA) application for commercial production. A FDA approved portable 3-D unit price is expected to drop below \$50,000. The project start date was delayed to the higher than expected McKenna cost share. Equipment installation and on-site training is scheduled for November 2000.

## **2. Sisseton Indian PHS Hospital, Dakota Health Network**

Area Office	Aberdeen Area
Indian Facility	Sisseton Indian PHS Hospital
Primary Use	Telehealth, telemedicine available
Use Status	Sustainable
Facility Contact	Brian LaBelle, Site Coordinator, Sisseton PHS Indian Hospital, PO Box 189, Sisseton, SD 57262 Phone 605-698-7606, Fax 605-698-4270, E-mail <blabelle@abrsi.Sisseton.aberdeen.ihs.gov>
Grantee	Dakota Health Network, Avera St. Luke's Hospital
Funding	ORHP - FYs 96-98 - \$603,432
Grant Contact	Gene Reich, Director, Avera St. Luke's Telehealth Services, 305 South State Street, Aberdeen, SD 57401 Phone 605-622-5035, Fax 605-622-5041 E-mail <Gene.Reich@averastlukes.org>
Summary	<b>The Sisseton Indian PHS Hospital receives continuing education from the Dakota Health Network operated by Avera St. Luke's in Aberdeen, South Dakota.</b>

The Sisseton Indian PHS Hospital is a member of the 13-site Avera St. Luke's Dakota Health Network that offers consultation services in mental health, cardiology, pulmonology, orthopedics, pediatrics, trauma, dermatology, post-operative care, wound care, and counseling on diabetes and nutrition. Another system use is staff training, grand round (physician) conferences, distance education, administrative meetings, and community meetings. In 1997, Avera St. Lukes installed at Sisseton a \$20,000 Picture Tel unit equipped with \$5,000 in peripherals. Interactive videoconferencing takes place over ISDN lines (384 Kbps). The project covered \$7,200 in telecom costs, but as of October 2000, Sisseton becomes responsible for a \$300 monthly connection charge. Sisseton hospital staff gave high marks to the educational programs, but indicated that the network was not heavily used for either education or medical consultation. Sisseton used the dial-up feature to consult with a burn specialist outside of the Dakota Health Network. The Sisseton patient referral pattern does not include Avera St. Lukes location in Aberdeen which may affect the interest in network use. Avera St. Lukes, however, provides daily courier service to Sisseton and other nearby towns for radiology services. This hospital also provides a regularly scheduled on-site radiologist.

### **3. Fort Yates PHS Indian Hospital, Dakota Telemedicine Network**

Area Office	Aberdeen Area
Indian Facility	Fort Yates PHS Indian Hospital
Primary Use	Telemedicine
Use Status	Sustainable
Facility Contact	Penny Wilke, MD, Clinician Director, Fort Yates PHS Indian Hospital, PO Box J, Fort Yates, ND 58538 Phone 701-854-3831, Fax 701-854-7399
Grantee	Medcenter One, Dakota Telemedicine Network
Funding:	TOP - FY 96 - \$400,000 RUS - FYs 96-97- \$816,968
Grant Contact	Carla Anderson, DTN Director, Medcenter One Health System, 300 North 7th Street, Bismarck, ND 58606 Phone 701-323-5616, Fax 701-323-5260, E-mail: < <a href="mailto:daktele@mohs.org">daktele@mohs.org</a> > Web site: < <a href="http://www.medcenterone.com">http://www.medcenterone.com</a> >
Summary	<b>The Fort Yates IHS Hospital's telemedicine program is evolving and a higher use rate is expected after facility remodeling is completed. The existing use rate has been affected by having scheduled-site provider services.</b>

The Fort Yates primarily used Medcenter One consultation for kidney dialysis and its use declined when Medcenter One's nephrologist hired a Physician Assistant for on-site service to the Indian hospital. Other on-site specialty services are also provided. Telemedicine use is temporarily on-hold during facility remodeling. The Clinician Director is interested in more emergency room applications. As such, the Fort Yates Hospital may change or have dual telemedicine partners that represent two referral hospitals in Bismarck, North Dakota, that are located one block apart. These telemedicine providers offer different flexibility between rollabout and fixed equipment and the choice of specialty consultations. This flexibility may be an important consideration because 15-20 Fort Yates Hospital Staff are involved in deciding the level and actual use of telemedicine. . West River Health Center, a Fort Yates' satellite clinic, uses the TeleCare Network connected with St. Alexius Medical Center.

Medcenter One operates the Dakota Telemedicine Network (DTN) from its integrated medical facility. The network has twelve sites, including the Fargo VA Medical Center. The DTN system is a closed, linking videoconferencing equipment at each site via dedicated T-1 lines. The Vtel videoconferencing rollabout equipment consists of camera and microphones, dual monitors, a document camera, and inputs and outputs for videotape recorders. The local physician uses a video recorder to present the patient for consultation when a specialist is not available for immediate consultation. Computers may also be connected to the system. The system is not yet Internet-based, but operates with an icon-based control panel and stylus. Each site is also connected to the hub via a dedicated analog phone line for scheduling services and faxing patient records from site-to-site.

DTS provides over 250 specialty consultation services. A full-time medical director, a telemedicine coordinator and support staff, manage the hub site. DTS supports a Fort Yates on-site coordinator position. Fort Yates also received equipment and a no-cost telecom connection. Currently, Medcenter One serves about five percent of its patient population through telemedicine consultations. DTS has resulted in a referral rate drop from the end-user sites, including the Fort Yates facility.

#### **4. West River Health Center, McLaughlin**

Area Office	Aberdeen Area
Indian Facility	West River Family Health Center, Cheyenne River Sioux
Primary Use	Telehealth, telemedicine available
Use Status	Sustainable
Facility Contact	James Foote, West River Health Center, PO Box 879, McLaughlin SD 57642, Phone 605-823-4458

Fax 605-823-4181

Grantee TeleCare Network, Northland Health Care Alliance (St. Alexius Hospital)

Funding ORHP - FY 97 - \$441,804  
OAT - FY 00-02 - \$720,000

Grant Contact Tim Cox, President, Northland Health Care Alliance, 400 East Broadway, Suite 300, Bismarck, ND 58501  
Phone 701-250-0709, Fax 701-250-0739  
E-mail <[tc Cox@northlandhealth.com](mailto:tc Cox@northlandhealth.com)> Web site  
<<http://www.telecare.org>>

**Summary The West River Health Center uses the TeleCare Network on a limited basis for emergency room consultation.**

The Northland Health Care Alliance operates the TeleCare Network through St. Alexius Hospital in Bismarck, North Dakota. The network serves 12 hospitals and four long-term care facilities and several affiliated sites in South Dakota. TeleCare Network uses NEC TeleDoc™ 5000 units that are fully integrated self-contained, portable telemedicine device providing two-way interactive video and audio. Members have consultative access via telemedicine to physicians and other clinicians in over 20 specialties including cardiology, orthopedics, dermatology, emergency medicine, neurology, obstetrics, mental health, pediatrics, and wound management. TeleCare also supports consultations with allied health professionals; administrative meetings, continuing education, employee assistance sessions, and patient care conferences. TeleCare has new equipment so member can dial-up experts outside of the TeleCare Network. The West River Health Center has a low use level, mostly for emergency consultations.

## **5. Oglala Sioux Tribal Community Health Representative Program**

Area Office Aberdeen Area

Indian Facility Oglala Sioux Tribal Community Health Representative Program

Primary Use Telehealth

Use Status Growing

Facility Contact James Watters, CHR Director, Oglala Sioux Tribe, Main Street Box A, Pine Ridge, SD 57770  
Phone 605-867-5801, Fax 605-867-5406

Grantee Oglala Sioux Tribe

Funding TOP - FY 97-00 - \$208,989

Grant Contact See Facility Contact

**Summary**                    **The Oglala Sioux Tribe operates an innovative Community Health Representative Program (CHR) that provides a wireless communication network to connect its field workers with patient records and other resources.**

The Oglala Sioux Tribal Community Health Representative (CHR) Program has a digital wireless home health care service called the Tribal Community Health Information Network. The CHR program provides critical health care services for elderly, home-based patients, and young mothers whose children require medication attention. The network testing has been completed and equipped with 25 hand-held radios and laptops. A web site is under construction for accessing information on diabetes, nutritional data, antidotes to toxins, and emerging infectious diseases. These tools will give CHR field workers the ability to manage patient needs visitation schedules, pharmacy requirements, and emergency services for homebound patients. This tribal initiative helps curb the health care crisis on the reservation, which lacks a health care preventive program. The CHR program has a FCC license to operate its own radio frequency. Project completion could not have been achieved without major in-kind support from an Idaho-based engineering firm for system design, deployment, and training. Full system deployment is set for January 2001. In the future, the system may add a paging system to coordinate responses from health and emergency services for high-risk patients. Separate from the grant, the CHR program will have the ability to download patient data into the Indian Health Service Record Patient Management System form the nine tribal district CHR Offices.

## **6. Mountain Plains Health Consortium**

Area Office Aberdeen Area

Indian Facility: Black Hills Training Center

Primary Use: Telehealth, on-site training

Use Status Continuing

Facility Contact Co-located Mountain Plains Health Consortium

Grantee Mountain Plains Health Consortium

Funding RUS FY 95 \$300,000

Grant Contact            Jan Smith, Coordinator, Mountain Plains Health Consortium, Box 187, Fort Meade, SD 57741  
Phone 605-347-7117, Fax 605-317-7119  
E-mail <[heds@heds.org](mailto:heds@heds.org)> Web site <<http://heds.org>>

**Summary                The Fort Meade VA Medical Center provides the IHS Aberdeen Area telehealth and on-site training through an interagency agreement.**

The Mountain Plains Health Consortium represents an interagency agreement between the Indian Health Service's Black Hills Training Center and the Fort Meade VA Medical Center for continuing education courses and on-site training. IHS contributes to staff, operations and satellite transmission costs. The satellite downlink hardware installation costs were paid by a federal grant. The consortium serves the Aberdeen Area, except for a satellite center in Tama, Iowa. The consortium also serves a tribal facility called Morning Star Manor, Fort Washakie, Wind River.